

In the Claims

The status of claims in the case is as follows:

- 1 1. [Previously presented] Method for evaluating a
2 network, comprising:

3 executing a plurality of burst tests to determine a
4 network's current streaming speed, wherein each said
5 burst test includes

6 transmitting a burst including a plurality of
7 packets over said network to a receiver;

8 determining a time of receipt by said receiver of
9 each said packet in said burst;

10 determining a total receipt time by said receiver
11 of all packets in said burst; and

12 discarding any burst in which all packets in said
13 burst have not been received back and are not in
14 the order said packets were transmitted;

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15 calculating an average receipt time of all bursts not
16 discarded; and

17 responsive to said average receipt time calculating a
18 current speed of said network.

1 2. [Previously presented] The method of claim 1, further
2 comprising:

3 evaluating a maximum speed of said network as a
4 function of a best observed time of receipt for said
5 bursts not discarded.

1 3. [Previously presented] The method of claim 2, further
2 comprising a step of:

3 responsive to detecting several instances of said time
4 of receipt representing current speeds close to said
5 maximum speed, determining that testing has stabilized.

1 4. [Previously presented] The method of claim 1, further
2 comprising:

3 constructing a logical best burst from packets in said

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4 bursts not discarded; and

5 evaluating streaming speed of said network as a
6 function of a total number of bits in said logical best
7 burst and total receipt time of said logical best
8 burst.

1 5. [Previously presented] The method of claim 4, each
2 said burst including at least i packets, and said
3 constructing comprising:

4 selecting a best time of receipt of each n th
5 ($n=1,2,\dots,i$) packet of said bursts not discarded; and

6 constructing as said logical best burst a burst
7 comprising i packets of packets $n=1,2,\dots,i$ selected as
8 having best times of receipt.

1 6. [Canceled]

1 7. [Previously presented] The method of claim 2, further
2 comprising a step of:

3 calculating an average streaming utilization percent by

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4 taking a ratio of the current speed of said network to
5 the streaming speed of said network.

6 8. [Previously presented] The method of claim 7, further
7 comprising a step of:

8 adjusting average streaming utilization for occurrences
9 of burst frame discards.

1 9. [Previously presented] The method of claim 1, said
2 transmitting step including a transmission of complex bursts
3 in which short and long frames are transmitted per test
4 iteration.

1 10. [Previously presented] The method of claim 9, further
2 comprising a step of determining the streaming speed of said
3 network by dividing a difference in size of said short
4 frames and said long frames by a difference in transmission
5 time between short frames and long frames.

1 11. [Currently amended] Method for establishing network
2 characteristics including an historical, current, and
3 predicted future of states of a network for all types of
4 network traffic, including interactive, browser, batch, and

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5 realtime traffic, comprising the steps of:

6 transmitting probative packets into said network, said
7 packets including echoed and non-echoed packets, of
8 like and differing lengths, of like and differing
9 network priority, individually and in bursts;

10 discarding any burst in which all packets in said burst
11 have not been received back and discarding any burst in
12 which any packets are received out of the order in
13 which they were transmitted;

14 measuring transit times of said probative packets;

15 calculating an average receipt time of all bursts not
16 discarded;

17 responsive to said average receipt time calculating a
18 current speed of said network; and

19 responsive to said transit times and said current
20 speed, determining capacity and utilization of said
21 network and of a component end processor and network
22 parts for deriving a streaming speed of said network.

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23 12. [Previously presented] System for evaluating the
24 characteristics of a network, comprising:

25 a send node for communicating probative packets into
26 said network, said packets including burst packets;

27 a receive node for determining that frames of said
28 packets are received in sequence and without
29 retransmission, and an elapsed time between first
30 through last frames of said packets;

31 a speed analysis application node responsive to said
32 elapsed time and a size of said packets for calculating
33 network speed.

1 13. [Previously presented] A program storage device
2 readable by a machine, tangibly embodying a program of
3 instructions executable by a machine to perform method steps
4 for evaluating characteristics of a network, said method
5 steps comprising:

6 communicating probative packets into said network, said

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7 packets including burst packets;

8 determining at a receiver of said packets that frames
9 of said packets are received in sequence and without
10 retransmission, and an elapsed time between first
11 through last frames of said packets;

12 responsive to said elapsed time and a size of said
13 packets calculating network speed.

1 14. [Currently amended] An article of manufacture
2 comprising:

3 a computer useable medium having computer readable program
4 code means embodied therein for evaluating a network, the
5 computer readable program means in said article of
6 manufacture comprising:

7 computer readable program code means for causing a
8 computer to effect executing a burst test to determine
9 a network's streaming speed, wherein each said burst
10 test includes

11 transmitting a plurality of packets over said

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12 network to a receiver;

13 discarding any burst in which all packets in said
14 burst have not been received back and discarding
15 any burst in which any packets are received out of
16 the order in which they were transmitted; and

17 determining a time of receipt of each said packets
18 by said receiver;

19 calculating an average receipt time of all bursts
20 not discarded;

21 computer readable program code means for causing a
22 computer to effect responsive to said average receipt
23 time of receipt of each said packets, calculating
24 capacity and utilization of said network and of a
25 component end processor and network parts for deriving
26 a current speed of said network.

27 15. [Currently amended] A program storage device readable
28 by a machine, tangibly embodying a program of instructions
29 executable by a machine for evaluating characteristics of a

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30 network, said instructions comprising:

31 transmitting probative packets into a network, said
32 packets including echoed and non-echoed packets, of
33 like and differing lengths, of like and differing
34 network priority, individually and in bursts;

35 discarding any burst in which all packets in said burst
36 have not been received back and discarding any burst in
37 which any packets are received out of the order in
38 which they were transmitted;

39 measuring the transit times of said probative packets;

40 calculating an average receipt time of all bursts not
41 discarded;

42 responsive to said average receipt time calculating a
43 current speed of said network; and

44 responsive to said transit times and said current
45 speed, determining capacity and utilization of said
46 network and of a component end processor and network
47 parts for deriving a streaming speed of said network.

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1 16. [Previously presented] A program storage device
2 readable by a machine, tangibly embodying a program of
3 instructions executable by a machine to perform operations
4 for evaluating characteristics of a network, said operations
5 comprising:

6 executing a plurality of burst tests to determine a
7 network's current speed, wherein each said burst test
8 includes

9 transmitting a burst including a plurality of
10 packets over said network to a receiver;

11 determining a time of receipt by said receiver of
12 each said packet in said burst;

13 determining a total receipt time by said receiver
14 of all packets in said burst; and

15 discarding any burst in which all packets in said
16 burst have not been received back and are not in
17 the order said packets were transmitted;

18 calculating an average receipt time of all bursts not

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19 discarded; and

20 responsive to said average receipt time calculating a
21 current speed of said network.

1 17. [Previously presented] The program storage device of
2 claim 16, said operations further comprising:

3 evaluating a maximum speed of said network as a
4 function of a best observed time of receipt for said
5 bursts not discarded.

1 18. [Previously presented] The program storage device of
2 claim 17, said operations further comprising:

3 responsive to detecting several instances of said time
4 of receipt representing current speeds close to said
5 maximum speed, determining that testing has stabilized.

1 19. [Previously presented] The program storage device of
2 claim 16, said operations further comprising:

3 constructing a logical best burst from packets in said
4 bursts not discarded; and

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5 evaluating streaming speed of said network as a
6 function of a total number of bits in said logical best
7 burst and total receipt time of said logical best
8 burst.

1 20. [Previously presented] The program storage device of
2 claim 19, each said burst including at least i packets, and
3 said operations further comprising:

4 selecting a best time of receipt of each n th
5 ($n=1,2,...i$) packet of said bursts not discarded; and

6 constructing as said logical best burst a burst
7 comprising i packets of packets $n=1,2,...i$ selected as
8 having best times of receipt.

1 21. [Previously presented] The program storage device of
2 claim 16, said operations further comprising:

3 calculating an average streaming utilization percent by
4 taking a ratio of network streaming speed to average
5 network streaming speed.

1 22. [Previously presented] The program storage device of

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2 claim 21, said operations further comprising:

3 adjusting average streaming utilization for occurrences
4 of burst frame discards.

1 23. [Previously presented] The program storage device of
2 claim 16, said transmitting operation including a
3 transmission of complex bursts in which short and long
4 frames are transmitted per test iteration.

1 24. [Previously presented] The program storage device of
2 claim 23, said operations further comprising:

3 determining streaming speed of said network by dividing
4 a difference in size of said short frames and said long
5 frames by a difference in transmission time between
6 short frames and long frames.

1 25. [Previously presented] Method for evaluating a
2 network, comprising:

3 executing a plurality of burst tests to determine a
4 network's current speed, wherein each said burst test
5 includes

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6 transmitting a burst including a plurality of
7 packets over said network to a receiver;

8 determining a time of receipt by said receiver of
9 each said packet in said burst;

10 determining a total receipt time by said receiver
11 of all packets in said burst; and

12 discarding any burst in which all packets in said
13 burst have not been received back and discarding
14 any burst in which all packets are not in the
15 order said packets were transmitted;

16 calculating an average receipt time of all bursts not
17 discarded;

18 responsive to said average receipt time calculating a
19 current speed of said network;

20 evaluating a maximum speed of said network as a
21 function of a best observed time of receipt for said
22 bursts not discarded; and

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23 responsive to detecting several instances of said time
24 of receipt representing current speeds close to said
25 maximum speed, determining that testing has stabilized.

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